

WHAT IS CLAIMED IS:

1. An information recording device for executing processing which stores data to a memory having a data storage area consisting of a plurality of blocks, each of which consists of the first sector to the M-th sector which each have a predetermined data capacity, where M represents a natural number, said information recording device comprising a cryptosystem unit which selectively uses different encryption keys for the first sector to the M-th sector to execute encryption processing and which executes encryption processing on data to be stored in each of the sectors.

2. An information recording device according to Claim 1, wherein, in said cryptosystem unit, from among M different encryption keys corresponding to M sectors, which are stored in header information corresponding to the data to be stored in said memory, one encryption key is selected in accordance with a sector in which the data is stored, and the selected encryption key is used to perform the encryption of data to be stored in each of the sectors.

3. An information recording device according to Claim 1, wherein, in said cryptosystem unit, from among M

different encryption keys corresponding to M sectors, which are stored in header information corresponding to the data to be stored in said memory, a set of at least two encryption keys is selected in accordance with a sector in which the data is stored, and the selected encryption keys are used to perform the encryption of data to be stored in each of the sectors.

4. An information recording device according to Claim 1, wherein, in said cryptosystem unit, from among P different encryption keys in which the number P differs from the number M, at least one encryption key is selected in accordance with a sector in which the data is stored, and the selected at least one encryption key is used to perform the encryption of data to be stored in each of the sectors.

5. An information recording device according to Claim 1, wherein, in said cryptosystem unit, the encryption processing for the first sector to the M-th sector is executed as single-DES encryption processing using different encryption keys for the sectors.

6. An information recording device according to Claim 1, wherein, in said cryptosystem unit, the encryption processing for the first sector to the M-th sector is

executed as triple-DES encryption processing using at least two different encryption keys for each of the sectors.

7. An information recording device according to Claim 1, wherein said cryptosystem unit selectively executes one of sector-independent encryption processing in which in accordance with an encryption format type stored in header information corresponding to the data to be stored in said memory, the entirety of the data is encrypted in a single encryption mode, and sector-dependent encryption processing in which in accordance with the encryption format type, the data is encrypted by using encryption keys which are selected for the sectors.

8. An information playback device for executing processing which reads data from a memory having a data storage area consisting of a plurality of blocks, each of which consists of the first sector to the M-th sector which each have a predetermined data capacity, where M represents a natural number, said information playback device comprising a cryptosystem unit which selectively uses different decryption keys for the first sector to M-th sector to execute decryption processing and which executes decryption processing on data stored in each of the sectors.

9. An information playback device according to Claim 8, wherein, in said cryptosystem unit, from among M different decryption keys corresponding to M sectors, which are stored in header information corresponding to data stored in said memory, one decryption key is selected in accordance with a sector in which the data is stored, and the selected decryption key is used to perform the decryption of data stored in each of the sectors.

10. An information playback device according to Claim 8, wherein, in said cryptosystem unit, from among M different decryption keys corresponding to M sectors, which are stored in header information corresponding to data stored in said memory, a set of at least two decryption keys is selected in accordance with a sector in which data is stored, and the selected encryption keys are used to perform the decryption of data stored in each of the sectors.

11. An information playback device according to Claim 8, wherein, in said cryptosystem unit, from among P different decryption keys in which the number P differs from the number M, at least one decryption key is selected in accordance with a sector in which data is stored, and the selected at least one decryption key is used to perform the decryption of data stored in each of the sectors.

12. An information playback device according to Claim 8, wherein, in said cryptosystem unit, the decryption processing for the first sector to the M-th sector is executed as single-DES decryption processing using different decryption keys for the sectors.

13. An information playback device according to Claim 8, wherein, in said cryptosystem unit, the decryption processing for the first sector to the M-th sector is executed as triple-DES decryption processing using at least two different decryption keys for each of the sectors.

14. An information playback device according to Claim 8, wherein said cryptosystem unit selectively executes one of sector-independent decryption processing in which in accordance with an encryption format type stored in header information corresponding to data stored in said memory, the entirety of the data is decrypted in a single decryption mode, and sector-dependent decryption processing in which in accordance with the encryption format type, the data is decrypted by using decryption keys which are selected for the sectors.

15. An information recording medium having a data

storage area consisting of a plurality of blocks, each of which consists of the first sector to the M-th sector which each have a predetermined data capacity, where M represents a natural number,

wherein a plurality of different cryptographic keys which are selectable for the sectors are stored as header information of data stored in said data storage area.

16. An information recording medium according to Claim 15, wherein said plurality of different cryptographic keys are M different encryption keys corresponding to the M sectors.

17. An information recording method for executing processing which stores data to a memory having a data storage area consisting of a plurality of blocks, each of which consists of the first sector to the M-th sector which each have a predetermined data capacity, where M represents a natural number, said information recording method comprising a data-encrypting step in which encryption processing on data to be stored in the sectors is executed by performing encryption using different encryption keys selected for the first sector to the M-th sector.

18. An information recording method according to Claim

17, wherein said data-encrypting step comprises the steps of:

selecting, from among M different encryption keys corresponding to the M sectors, the M different encryption keys being stored in header information corresponding to the data to be stored in said memory, one encryption key in accordance with a sector in which the data is stored; and

performing the encryption based on the selected encryption key of data to be stored in each of the sectors.

19. An information recording method according to Claim 17, wherein said data-encrypting step comprises the steps of:

selecting, from among M different encryption keys corresponding to the M sectors, the M different encryption keys being stored in header information corresponding to the data to be stored in said memory, a set of at least two encryption keys in accordance with a sector in which the data is stored; and

performing the encryption based on the selected encryption keys of data to be stored in each of the sectors.

20. An information recording method according to Claim 17, wherein said data-encrypting step comprises the steps of:

selecting, from among P different encryption keys stored in header information corresponding to the data to be stored in said memory, in which the number P differs from the number M, at least one encryption key in accordance with a sector in which the data is stored; and

performing the encryption based on the at least one encryption key of data to be stored in each of the sectors.

21. An information recording method according to Claim 17, wherein, in said data-encrypting step, the encryption processing is executed as single-DES encryption processing using different encryption keys for the sectors.

22. An information recording method according to Claim 17, wherein, in said data-encrypting step, the encryption processing is executed as triple-DES encryption processing using at least two different encryption keys for each of the sectors.

23. An information recording method according to Claim 17, further comprising a determination step for determining which type of processing should be executed between sector-independent encryption processing in which in accordance with an encryption format type stored in header information corresponding to the data to be stored in said memory, the



entirety of the data is encrypted in a single encryption mode, and sector-dependent encryption processing in which in accordance with the encryption format type, the data is encrypted by using encryption keys which are selected for the sectors,

wherein one of said sector-independent encryption processing and said sector-dependent encryption processing is selectively executed based on the determination in said determination step.

24. An information playback method for executing processing which reads data from a memory having a data storage area consisting of a plurality of blocks, each of which consists of the first sector to the M-th sector which each have a predetermined data capacity, where M represents a natural number,

said information playback method comprising a data-decrypting step in which decryption of data stored in each of the sectors is performed by executing decryption processing using different decryption keys selected in accordance with the first sector to the M-th sector.

25. An information playback method according to Claim 24, wherein said data-decrypting step comprises the steps of:

selecting, from among M different decryption keys corresponding to the M sectors, which are stored in header information corresponding to data stored in said memory, one decryption key in accordance with a sector in which data is stored; and

performing the decryption based on the selected decryption key of data stored in each of the sectors.

26. An information playback method according to Claim 24, wherein said data-decrypting step comprises the steps of:

selecting, from among M different decryption keys corresponding to the M sectors, the M different decryption keys being stored in header information corresponding to data stored in said memory, a set of at least two decryption keys in accordance with a sector in which data is stored; and

performing the decryption based on the selected decryption keys of data stored in each of the sectors.

27. An information playback method according to Claim 24, wherein said data-decrypting step comprises the steps of:

selecting, among from P different decryption keys stored in header information corresponding to data stored in

said memory, in which the number P differs from the number M, at least one decryption key in accordance with a sector in which data is stored; and

performing the decryption based on the selected decryption keys of data stored in each of the sectors.

28. An information playback method according to Claim 24, wherein said data-decrypting step is executed as single-DES decryption processing using different decryption keys for the sectors.

29. An information playback method according to Claim 24, wherein said data-decrypting step is executed as triple-DES decryption processing using at least two decryption keys for each of the sectors.

30. An information playback method according to Claim 24, further comprising a determination step for determining which type of decryption processing should be executed between sector-independent decryption processing in which in accordance with an encryption format type stored in header information corresponding to data stored in said memory, the entirety of the data is decrypted in a single decryption mode, and sector-dependent decryption processing in which in accordance with the encryption format type, the data is

decrypted by using decryption keys which are selected for the sectors,

wherein one of said sector-independent decryption processing and said sector-dependent decryption processing is selectively executed based on the determination in said determination step.

31. A program providing medium for providing a computer program which controls a computer system to execute processing which stores data in a memory having a data storage area consisting of a plurality of blocks, each of which consists of the first sector to the M-th sector which each have a predetermined data capacity, where M represents a natural number,

said computer program comprising a data-encrypting step in which encryption processing on data to be stored in the sectors is executed by performing encryption using encryption keys selected for the first sector to the M-th sector.

32. A program providing medium for providing a computer program which controls a computer system to execute processing which reads data from a memory having a data storage area consisting of a plurality of blocks, each of which consists of the first sector to the M-th sector which

each have a predetermined data capacity, where M represents a natural number,

said computer program comprising a data-decrypting step in which decryption of data stored in each of the sectors is performed by executing decryption processing using decryption keys selected in accordance with the first sector to the M-th sector.

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